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10/604,684	08/10/2003	Ming-Hsun Hsu	VIAP0073USA	1683

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NORTH AMERICA INTELLECTUAL PROPERTY CORPORATION
P.O. BOX 506
MERRIFIELD, VA 22116

EXAMINER
NGUYEN, TOAN D

ART UNIT	PAPER NUMBER
2616	

NOTIFICATION DATE	DELIVERY MODE
10/15/2007	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

winstonhsu.uspto@gmail.com
Patent.admin.uspto.Rcv@naipo.com
mis.ap.uspto@naipo.com.tw

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) ☒ Responsive to communication(s) filed on <u>08 August 2007</u>.

2a) ☒ This action is **FINAL**.   2b) ☐ This action is non-final.

3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) ☒ Claim(s) <u>1-20</u> is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5) ☐ Claim(s) _____ is/are allowed.

6) ☒ Claim(s) <u>1-6,8,9,11-16,18 and 19</u> is/are rejected.

7) ☒ Claim(s) <u>7,10,17 and 20</u> is/are objected to.

8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) ☐ The specification is objected to by the Examiner.

10) ☒ The drawing(s) filed on <u>10 August 2003</u> is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a) ☒ All   b) ☐ Some *   c) ☐ None of:

      1. ☒ Certified copies of the priority documents have been received.

      2. ☐ Certified copies of the priority documents have been received in Application No. _____.

      3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.

4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.

5) ☐ Notice of Informal Patent Application

6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 103

1.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2.   This application currently names joint inventors. In considering patentability of

the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of

the various claims was commonly owned at the time any inventions covered therein

were made absent any evidence to the contrary. Applicant is advised of the obligation

under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was

not commonly owned at the time a later invention was made in order for the examiner to

consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g)

prior art under 35 U.S.C. 103(a).

3.   Claims 1-6, 8-9, 11-16, and 18-19 are rejected under 35 U.S.C. 103(a) as being

unpatentable over Lippett et al. (US 6,667,993) in view of Basil et al. (US

2002/0138850) further in view of admission prior art.

For claims 1-3, Lippett et al. disclose communication channel, comprising:

a first scrambler (figure 4, reference 420, col. 6 lines 56-57);

a second scrambler (figure 5, reference 400(1), col. 5 lines 3-5).

However, Lippett et al. do not expressly disclose generating a first transmission

signal by executing a logic operation with a first signal and a first scrambling code; and

for generating a second transmission signal by executing the logical operation with a second signal and a second scrambling code, wherein the first scrambling code and the second scrambling code are different such that the first transmission signal and the second transmission signal are unlike. In an analogous art, Basil et al. disclose generating a first transmission signal by executing a logic operation with a first signal and a first scrambling code (page 4 paragraph [0043], and page 5 paragraph [0051]); and for generating a second transmission signal by executing the logical operation with a second signal and a second scrambling code, wherein the first scrambling code and the second scrambling code are different such that the first transmission signal and the second transmission signal are unlike (page 5, paragraph [0052]).

Basil et al. disclose wherein the first scrambler comprises a first random number generator for executing a second logic operation with a first seed to generate the first scrambling code, and the second scrambler comprises a second random number generator for executing the second logic operation with a second seed to generate the second scrambling code; wherein the first seed and the second seed are different so that the first scrambling code and the second scrambling code are unlike (page 5, paragraph [0052] as set forth in claim 2), capable of updating the value of the first seed after a predetermined period after the first scrambler generates the first transmission signal, and capable of updating the value of the second seed after the predetermined period after the second scrambler generates the second transmission signal (page 4, paragraph [0043] as set forth in claim 3).

One skilled in the art would have recognized the generating a first transmission

signal by executing a logic operation with a first signal and a first scrambling code, and

would have applied Basil et al.'s scrambling seeds in Lippett et al.'s scrambler.

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the

invention, to use Basil et al.'s data scrambling system for a shared transmission media

in Lippett et al.'s communication channel with the motivation being achieved by using a

different way to calculate the seed based on the target client modem MAC ID (page 5,

paragraph [0052]).

Furthermore, Lippett et al. in view of Basil et al. do not expressly disclose a MAC

circuit; a first scrambler coupled to the MAC circuit; a second scrambler coupled to the

MAC circuit; and a first transmission port coupled to the first scrambler for transmitting

only the first transmission signal to a network node; and a second transmission port

coupled to the second scrambler for transmitting only the second transmission signal to

another network node. The admission prior art discloses a MAC circuit (figure 1,

reference 12); a first scrambler (figure 1, reference 16A) coupled to the MAC circuit

(figure 1, reference 12); a second scrambler (figure 1, reference 16B) coupled to the

MAC circuit (figure 1, reference 12); and a first transmission port (figure 1, reference

20A) coupled to the first scrambler (figure 1, reference 16A) for transmitting only the first

transmission signal to a network node (figure 1, reference 24A); and a second

transmission port (figure 1, reference 20B) coupled to the second scrambler (figure 1,

reference 16B) for transmitting only the second transmission signal to another network

node (figure 1, reference 24B)(see specification, paragraph [0007]).

One skilled in the art would have recognized the MAC circuit; a first scrambler coupled to the MAC circuit; a second scrambler coupled to the MAC circuit; and a first transmission port coupled to the first scrambler for transmitting only the first transmission signal to a network node; and a second transmission port coupled to the second scrambler for transmitting only the second transmission signal to another network node, and would have applied the admission prior art in Lippett et al.'s scrambler. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention, to use the admission prior art in Lippett et al.'s communication channel with the motivation being used to control the signal transmission of each PHY circuit to each node (see specification, paragraph [0007] lines 1-6).

For claim 4, Lippett et al. disclose in which the first scrambler generates the first transmission signal after receiving a first reset signal, and the second scrambler generates the second transmission signal after receiving a second reset signal, wherein the first reset signal and the second reset signal are transmitted to the first scrambler and the second scrambler respectively at different times so that the first scrambler and the second scrambler start to generate the first transmission signal and the second transmission signal respectively at different times (Table 2, reference RESET, col. 7 lines 43-44).

For claim 5, Lippett et al. disclose capable of setting an initial value to the first seed when the first scrambler receives the first reset signal and another initial value to the second seed when the second scrambler receives the second reset signal (Table 2, reference RESET, col. 7 lines 43-44).

For claim 6, Lippett et al. disclose further comprising a first encoder and a second encoder for encoding the first transmission signal and the second transmission signal respectively in the same way, the encoded first transmission signal and the encoded second transmission signal being transmitted to the corresponding network nodes through the two transmission ports, wherein the first encoder and the second encoder encode a signal composed of 0 and 1 values to one composed of 0, 1, and 1 values (col. 6 lines 4-20).

For claim 8, Lippett et al. disclose communication channel, comprising:

a reset circuit for generating a first reset signal and a second reset signal (Table 2, reference RESET, col. 5 lines 9-11);

a first signal circuit comprising at least a first scrambler (figure 4, reference 420, col. 6 lines 56-57);

a second signal circuit comprising at least a second scrambler (figure 5, reference 400(1), col. 5 lines 3-5).

However, Lippett et al. do not expressly disclose generating a first transmission signal by utilizing the first scrambler to execute a logical operation with a first signal and a first scrambling code when receiving a first reset signal; and generating a second transmission signal by utilizing the second scrambler to execute the logical operation with a second signal and a second scrambling code when receiving a second reset signal. In an analogous art, Basil et al. disclose generating a first transmission signal by utilizing the first scrambler to execute a logical operation with a first signal and a first scrambling code when receiving a first reset signal (page 4, paragraph [0043, and page

5 paragraph [0051]); and generating a second transmission signal by utilizing the

second scrambler to execute the logical operation with a second signal and a second

scrambling code when receiving a second reset signal (page 5, paragraph [0052]).

One skilled in the art would have recognized the generating a first transmission

signal by utilizing the first scrambler to execute a logical operation with a first signal and

a first scrambling code when receiving a first reset signal, and would have applied Basil

et al.'s scrambling seeds in Lippett et al.'s scrambler. Therefore, it would have been

obvious to one of ordinary skill in the art at the time of the invention, to use Basil et al.'s

data scrambling system for a shared transmission media in Lippett et al.'s

communication channel with the motivation being achieved by using a different way to

calculate the seed based on the target client modem MAC ID (page 5, paragraph

[0052]).

Furthermore, Lippett et al. in view of Basil et al. do not expressly disclose a first

signal circuit coupled to the reset circuit; a second signal circuit coupled to the reset

circuit; a first transmission port coupled to the first scrambler for transmitting only the

first transmission signal to a network node; and a second transmission port coupled to

the second scrambler for transmitting only the second transmission signal to another

network node. The admission prior art discloses a first signal circuit coupled to the reset

circuit; a second signal circuit coupled to the reset circuit ((figure 1, reference 26,

paragraph [0007]; and a first transmission port (figure 1, reference 20A) coupled to the

first scrambler (figure 1, reference 16A) for transmitting only the first transmission signal

to a network node (figure 1, reference 24A); and a second transmission port (figure 1,

reference 20B) coupled to the second scrambler (figure 1, reference 16B) for

transmitting only the second transmission signal to another network node (figure 1,

reference 24B)(see specification, paragraph [0007]).

One skilled in the art would have recognized the a first signal circuit coupled to

the reset circuit; a second signal circuit coupled to the reset circuit; a first transmission

port coupled to the first scrambler for transmitting only the first transmission signal to a

network node; and a second transmission port coupled to the second scrambler for

transmitting only the second transmission signal to another network node, and would

have applied the admission prior art in Lippett et al.'s scrambler. Therefore, it would

have been obvious to one of ordinary skill in the art at the time of the invention, to use

the admission prior art in Lippett et al.'s communication channel with the motivation

being to initialize the control course, the state machine, and the data registers and

restart the function of the network interface circuit (see specification, paragraph [0007]).

For claim 9, Lippett et al. disclose in which the reset circuits generate the first

reset signal and the second reset signal at different times so that the time of the first

signal circuit to generate the first transmission signal and the time of the second signal

circuit to generate the second transmission signal are not the same (col. 7 lines 43-44

for each scrambler 420 means).

For claims 11-13, Lippett et al. disclose communication channel, comprising:

transmitting the first transmission signal and the second transmission signal to

the network respectively (Table 3, col. 5 lines 57-60 for each transmitter which included

scrambler means).

However, Lippett et al. do not expressly disclose:

executing a logical operation with a first signal and a first scrambling code, and executing the logical operation with a second signal and a second scrambling code, wherein the second scrambling code is different with the first scrambling code so the first transmission signal and the second transmission signals are different even when the first signal is equal to the second signal.

In an analogous art, Basil et al. disclose executing a logical operation with a first signal and a first scrambling code (page 4, paragraph [0043], and page 5 paragraph [0051]), and executing the logical operation with a second signal and a second scrambling code, wherein the second scrambling code is different with the first scrambling code so the first transmission signal and the second transmission signals are different even when the first signal is equal to the second signal (page 5, paragraph [0052]).

Basil et al. disclose the first scrambling code is generated by executing a second logical operation with a first seed and the second scrambling code is generated by executing the second logical operation with a second seed, wherein the first seed and the second seed are different so that the first scrambling code and the second scrambling code are unlike (page 5, paragraph [0052] as set forth in claim 12), in which the value of the first seed is updated after a predetermined period after the first transmission signal is generated, and the value of the second seed is updated after the predetermined period after the second transmission signal is generated (page 4, paragraph [0043] as set forth in claim 13).

One skilled in the art would have recognized the generating a first transmission signal by executing a logic operation with a first signal and a first scrambling code, and would have applied Basil et al.'s scrambling seeds in Lippett et al.'s scrambler. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention, to use Basil et al.'s data scrambling system for a shared transmission media in Lippett et al.'s communication channel with the motivation being achieved by using a different way to calculate the seed based on the target client modem MAC ID (page 5, paragraph [0052]).

Furthermore, Lippett et al. in view of Basil et al. do not expressly disclose transmitting the first transmission signal to a node of the network and the second transmission signal to another node. The admission prior art discloses transmitting the first transmission signal to a node of the network and the second transmission signal to another node (see specification, paragraph [0007]).

One skilled in the art would have recognized the transmitting the first transmission signal to a node of the network and the second transmission signal to another node, and would have applied the admission prior art in Lippett et al.'s scrambler. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention, to use the admission prior art in Lippett et al.'s communication channel with the motivation being transmitted the signals differentially to corresponding nodes (see specification, paragraph [0007]).

For claim 14, Lippett et al. disclose in which the first transmission signal is generated after receiving a first reset signal, and the second transmission signal is

generated after receiving a second reset signal, wherein the first reset signal and second reset signal turn on the process of generating the first scrambling code and the process of generating the second scrambling code at different times, so that first transmission signal and the second transmission signal are generated at different times (Table 2, reference RESET, col. 7 lines 43-44).

For claim 15, Lippett et al. disclose in which the first seed is set to an initial value when the first reset signal is received, and the second seed is set to another initial value when the second reset signal is received (Table 2, reference RESET, col. 7 lines 43-44).

For claim 16, Lippett et al. disclose capable of encoding the first transmission signal and the second transmission signal respectively in the same way, the encoded first transmission signal and the encoded second transmission signal being transmitted to the corresponding network nodes through the two transmission ports, the way of encoding is to encode a digital signal composed of 0 and 1 values to one composed of 0, 1, and 1 values (col. 6 lines 4-20).

For claim 18, Lippett et al. disclose communication channel, comprising:

receiving a first reset signal and a second reset signal (Table 2, reference RESET, col. 5 lines 9-11); and

transmitting the first transmission signal and the second transmission signal to the network respectively (Table 3, col. 5 lines 57-60 for each transmitter which included scrambler means).

However, Lippett et al. do not expressly disclose executing a logical operation with a first signal and a first scrambling code to generate a first transmission signal right after receiving the first reset signal, and executing the logical operation with a second signal and a second scrambling code to generate a second transmission signal right after receiving the second reset signal, wherein the second transmission signal are different from the first transmission signal. In an analogous art, Basil et al. disclose executing a logical operation with a first signal and a first scrambling code to generate a first transmission signal right after receiving the first reset signal (page 4, paragraph [0043, and page 5 paragraph [0051]), and executing the logical operation with a second signal and a second scrambling code to generate a second transmission signal right after receiving the second reset signal, wherein the second transmission signal are different from the first transmission signal (page 5, paragraph [0052]).

One skilled in the art would have recognized the executing a logical operation with a first signal and a first scrambling code to generate a first transmission signal right after receiving the first reset signal, and would have applied Basil et al.'s scrambling seeds in Lippett et al.'s scrambler. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention, to use Basil et al.'s data scrambling system for a shared transmission media in Lippett et al.'s communication channel with the motivation being achieved by using a different way to calculate the seed based on the target client modem MAC ID (page 5, paragraph [0052]).

Furthermore, Lippett et al. in view of Basil et al. do not expressly disclose transmitting the first transmission signal to a node of the network and the second

transmission signal to another node. The admission prior art discloses transmitting the

first transmission signal to a node of the network and the second transmission signal to

another node (see specification, paragraph [0007]).

One skilled in the art would have recognized the transmitting the first

transmission signal to a node of the network and the second transmission signal to

another node, and would have applied the admission prior art in Lippett et al.'s

scrambler. Therefore, it would have been obvious to one of ordinary skill in the art at the

time of the invention, to use the admission prior art in Lippett et al.'s communication

channel with the motivation being transmitted the signals differentially to corresponding

nodes (see specification, paragraph [0007]).

For claim 19, Lippett et al. disclose generating the first reset signal and the

second reset signal at different times respectively so that the times to generate the first

transmission signal and the second transmission signal are different (col. 7 lines 43-44

for each scrambler 420 means).

Allowable Subject Matter

4.   Claims 7, 10, 17, and 20 are objected to as being dependent upon a rejected

base claim, but would be allowable if rewritten in independent form including all of the

limitations of the base claim and any intervening claims.

Response to Arguments

5.   Applicant's arguments with respect to claims 1-20 have been considered but are

moot in view of the new ground(s) of rejection.

Conclusion

6.   Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

7.   Any inquiry concerning this communication or earlier communications from the examiner should be directed to Toan D. Nguyen whose telephone number is 571-272-3153. The examiner can normally be reached on M-F (7:00AM-4:30PM).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mr. Huy Vu can be reached on 571-272-3155. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the

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USPTO Customer Service Representative or access to the automated information

system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

TN

HUY D. VU
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600